

Plant Species Evaluation Form

Montia howellii Wats.

HOWELL'S MONTIA

Family: Montiaceae
(CNPS 2018)

PLANTS Symbol: MOHO
(USDA 2018)

Calif. Endemic: No
(CNPS 2018)

Synonyms/Other Names: *Montia howellii* was described by S. Watson in 1882, on the basis of specimens provided by T. Howell (Sereno 1883). The taxon was recombined as *Claytonia howellii* by C.V. Piper in 1906. It was then moved to *Montiastrum howellii* in 1932, by P.A. Rydberg. Finally, O.E.G. Nilsson erected the genus *Maxia* in 1967, into which this species was placed as *M. howellii*. The basionym, *Montia howellii* Watson, is the accepted name; synonyms may be encountered in the literature, but should not be used (Tropicos 2018).

Identification Issues: Difficulty may be encountered in distinguishing *M. howellii* from *M. dichotoma*, as most characters in the key are quantitative and overlapping. However, the two species' ranges appear to be distinct: *M. howellii* occurs on the western margin of the Klamath Ranges (KR) bioregion and to the south, while *M. dichotoma* is found in the northeastern sector of the KR bioregion and to the east (Miller and Chambers 2012). *Montia howellii* is sometimes confused for *M. fontana*, but close inspection will reveal that the latter has opposite leaves (CNPS 2018).

Taxonomy:

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Species In Genus: 12 species: Worldwide. **Etymology:** (Giuseppe Monti, Italian botanist, 1682--1760). **Note:** Sometimes divided into 9 genera.

Habit: Annual 1--9 cm, matted, rooting at lower nodes. **Leaf:** alternate, 5--25 mm, linear or +-oblanceolate. **Inflorescence:** few to many, in axils of membranous bracts opposite stem leaves, sessile; flowers 2--6, lowest 1 bracted. **Flower:** generally cleistogamous; sepals 0.8--1.5 mm, widely ovate, obtuse; petals 0--0.7 mm, +-unequal, white; stamens 3. **Fruit:** 0.9--1.2 mm. **Seed:** 0.7--0.9 mm, smooth; appendage << 0.2 mm. **eFlora Treatment Author:** John M. Miller & Kenton L. Chambers.

Status:

Note: Federally recognized Endangered, Threatened, Proposed, or Candidate species under the Endangered Species Act are omitted as they do not meet the definition of a Species of Conservation Concern (FSH 1909.12 § 12.52).

State Listing	G-rank	S-rank	CRPR	R5 FSS	NFP SM	CA BLM
CA: Not listed NV: Not listed OR: Candidate	G3G4	CA: S2 NV: Not listed OR: S3S4	2B.2	Not listed	Not listed	Not listed
SWAP: Not listed	NNHP: Not listed	NNPS: Not listed	ORBIC: Not listed	OCS: Not listed	IUCN: Not listed	

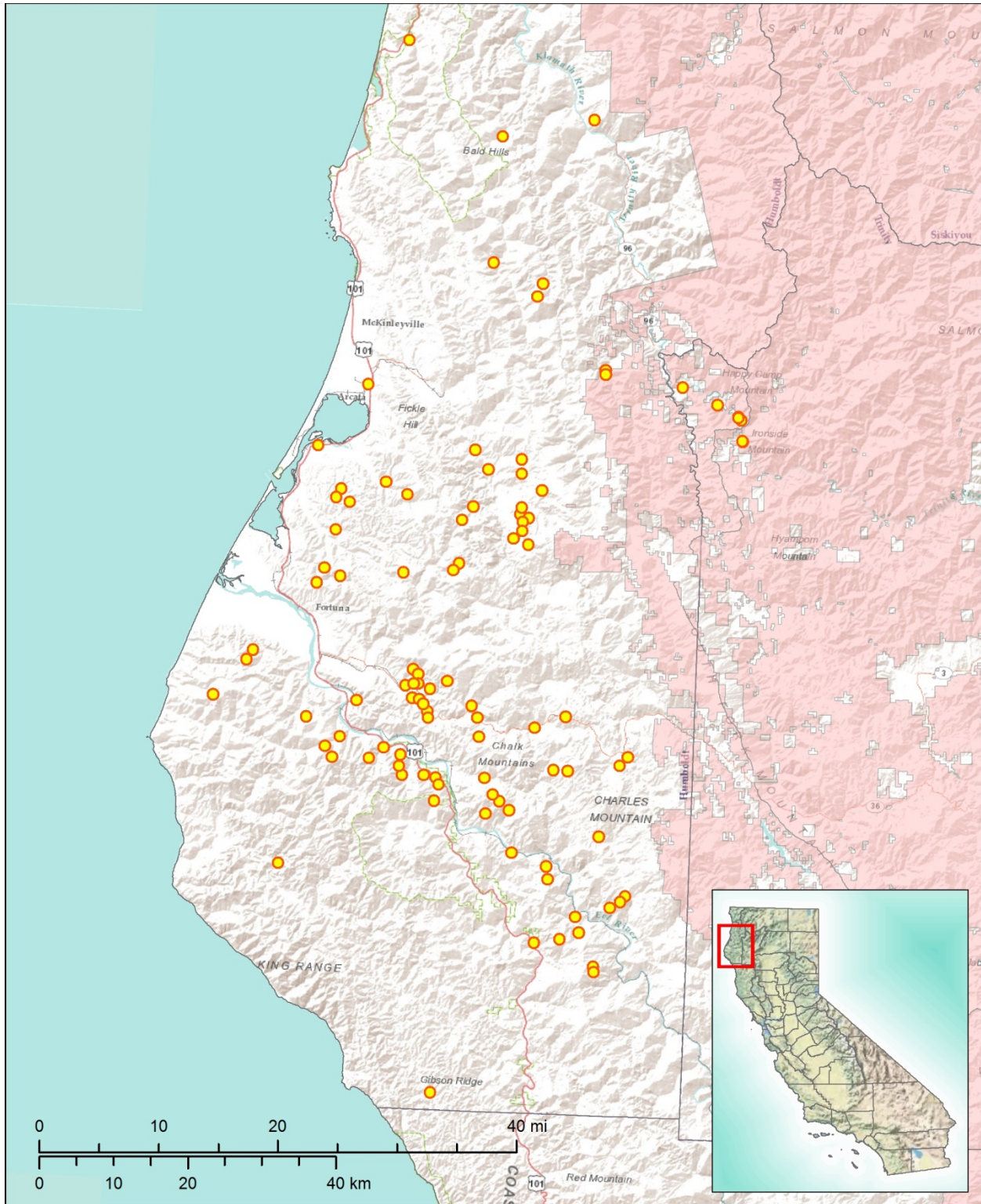
Expanded abbreviations and citations: State Listing=California Endangered Species Act Listing (CDFW 2018b), Nevada Division of Forestry Fully Protected Plant Species (NAC 527) (NDF 2012), Oregon Department of Agriculture Listed Plants (ODA 2014); G-rank=Global Conservation Status (CDFW 2018a; NatureServe 2018); S-rank=Subnational (state or province-level) Conservation Status (CDFW 2018a; NatureServe 2018; NNHP 2017; ORBIC 2016); CRPR=California Rare Plant Rank (CNPS 2018); R5 FSS=USDA Forest Service Region 5 Regional Forester Sensitive Plant Species List (USDA 2013); NFP SM=Forest Service and Bureau of Land Management Northwest Forest Plan Survey and Manage Species (USDA 2001); CA BLM=California Bureau of Land Management Designated Sensitive Species (BLM 2010); SWAP=California State Wildlife

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Action Plan Status (CDFW 2015); NNHP=Nevada Natural Heritage Program Status (NNHP 2017); NNPS=Nevada Native Plant Society Status (NNHP 2017); ORBIC=Oregon Biological Information Center Status (ORBIC 2016); OCS=Oregon Conservation Strategy Species (ODFW 2016); IUCN=International Union for Conservation of Nature Red List Status (IUCN 2017).

Distribution: *Montia howellii* occurs along the western edge of the North America, including parts of British Columbia, Washington, and Oregon, as well as northwestern California. Within California, it is found in the Klamath Ranges (KR), North Coast (NCo), and North Coast Ranges (NCoR) bioregions within Humboldt and Trinity Counties (CNPS 2018, Miller and Chambers 2012). National Forest System lands on which this species has been recorded include Shasta-Trinity NF and Six Rivers NF, both having plants within the forest and on adjoining lands within five-miles of the forest boundaries (CNDDB 2017, NRIS 2017).

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Sources: *Distribution:* CNDDDB 2017, NRIS 2017. *Layers:* USDA Forest Service, Pacific Southwest National Forests: CPAD 2016. California counties: CDF 2009. *Basemaps:* California inset map: © 2013 National Geographic Society, i-cubed (Esri 2017a). Main map: Esri, DeLorme, USGS, NPS (Esri 2012) and Esri, USGS, NOAA (Esri 2017b).

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Locations within California:

Record numbers indicate sites that contain an individual, population, or groups of populations located within ¼ mile of each other, per the California Natural Diversity Database (CNDDDB 2017) definition of Element Occurrences (EOs) in California. Official EO numbers for plants in California are determined solely by the CNDDDB and are included within the Reference (Source) column for CNDDDB data. Duplicate records from the same site are given the same record number and included in red. The Population Info column includes total number of individuals and total number and size of populations/sub-populations when provided. Elevations provided in meters from source have been converted to feet. If not provided in original source, Land Manager information was obtained using the California Protected Areas Database (CPAD 2016) and Quad information was obtained using 24K Quads, SDE Feature Class (CDFG 2013). All other information is directly from the Reference (Source) unless additional citation is given.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
1	EUREKA.	Humboldt Pacific Ocean	Eureka (4012472)	CNDDDB, May 2017 (EO 1)	7-May- 1916	OCCURRENCE IS BASED ON 4 TRACY COLLECTIONS FROM 1904, 1909, AND 1916. AREA SEARCHED IN 1989 BUT NO PLANTS FOUND; MAY HAVE BEEN TOO LATE IN SEASON.		Unknown	50
2	PHILLIPSVILLE FLAT, SOUTH FORK EEL RIVER.	Humboldt	Miranda (4012327)	CNDDDB, May 2017 (EO 2)	24-Apr- 1921	ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1921 COLLECTION BY TRACY.		Unknown	280
3	VICINITY OF SALYER.	Humboldt Trinity	Salyer (4012385)	CNDDDB, May 2017 (EO 3)	14-May- 1929	SITE KNOWN FROM SINGLE COLLECTION BY TRACY IN 1929 (#8021, WTU). PLANTS NOT SEEN IN 2004, PRESUMABLY EXTIRPATED BY CONSTRUCTION OF HIGHWAY 299 ACCORDING TO IMPER AND MCRAE.	HIGHWAY CONSTRUCTION, FOREST ENCROACHMENT, AND RESIDENTIAL DEVELOPMENT COULD HAVE ELIMINATED HABITAT.	Unknown	600
4	BRIDGEVILLE.	Humboldt	Bridgeville (4012347)	CNDDDB, May 2017 (EO 4)	7-Jun-1933	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1933 COLLECTION BY TRACY (NY #12526).		Unknown	250
5	WHITE THORN VALLEY.	Humboldt	Briceland (4012318)	CNDDDB, May 2017 (EO 5)	20-Jun- 1923	ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1923 COLLECTION BY TRACY (SN, JEPS/UC).		Unknown	1020

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
6	REDWOOD CREEK AT BERRY'S.	Humboldt	Orick (4112431)	CNDDDB, May 2017 (EO 6)	15-Apr-1923	ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1923 COLLECTION BY TRACY. SITE VISITED IN 1989, NO PLANTS FOUND.		Unknown	100
7	UPPER LARABEE CREEK, ABOUT 0.5 MILE EAST OF PAYTON RANCH, ABOUT 2 MILES NE OF BILLY GOAT PEAK, EEL RIVER DRAINAGE.	Humboldt	Blocksburg (4012336)	CNDDDB, May 2017 (EO 7)	1-Jun-2001	ABOUT 300 PLANTS OBSERVED IN 2000. FEWER PLANTS OBSERVED IN 2001. NO PLANTS FOUND IN 2004. CATTLE HOOF-PRINTS AND OTHER DEPRESSIONS PROVIDE HABITAT: PONDING WATER AND EXPOSED MINERAL SOILS.	VEHICLE AND CATTLE TRAFFIC; ROAD CONSTRUCTION / HEAVY GRADING, TIMBER HARVEST, AND COMPETITION FROM EXOTICS.	PVT-RH Kay Trust	1580
8	UPPER NEWMAN CREEK, ABOUT 1.6 - 2.0 MILES NORTH OF THOMPSON BLUFF, NORTH OF MYERS FLAT, EEL RIVER DRAINAGE.	Humboldt	Myers Flat (4012337)	CNDDDB, May 2017 (EO 8)	30-Jan-2015	ABOUT 3000 PLANTS OBSERVED IN 2000. 47 PLANTS OBSERVED IN 2008 AND 2009. 1 PLANT OBSERVED IN 2010. NO PLANTS FOUND IN 2012. 17 PLANTS OBSERVED IN 2013 & 2015.	SOME PLANTS BURIED BY SLASH FROM RECENT SELECTIVE LOGGING; ROAD MAINTENANCE, TRAFFIC, & COMPETITION FROM GRASSES/FORBS.	PVT-Humboldt Redwood Co	1300
9	COLD CREEK, ABOUT 2.5 AIR MILES ESE OF CHALK ROCK, APPROXIMATELY 5 MILES SOUTH OF BRIDGEVILLE ON ALDERPOINT ROAD.	Humboldt	Bridgeville (4012347)	CNDDDB, May 2017 (EO 9)	11-May-2000	ABOUT 3000 PLANTS OBSERVED IN 2000. NEEDS LIGHT DISTURBANCE TO MAINTAIN HABITAT.	INCREASED TRAFFIC OR ROAD RECONSTRUCTION, SELECTIVE TIMBER HARVEST; CATTLE GRAZING.	PVT-Diamond Ranch	1440

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10	SOUTH OF VAN DUZEN RIVER, JUST SOUTH OF VAN DUZEN COUNTY PARK, ABOUT 1.3 MI SE OF RIVERSIDE PARK, WEST OF BRIDGEVILLE.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 10)	30-Jan-2015	APPROXIMATELY 214 PLANTS OBSERVED IN 1999. UNKNOWN NUMBER OF PLANTS OBSERVED IN 2005 AND 2007. NO PLANTS FOUND IN 2009, 2012, OR 2013; ROAD WAS OVERGROWN. 80 PLANTS IN 2015, AFTER 2014 HARVEST AND ROADWORK.	ROAD AND POWERLINE MAINTENANCE, VEHICLE TRAFFIC, COMPETITION WITH OTHER VEGETATION, INVASIVE EXOTICS, TIMBER HARVEST.	PVT-Humboldt Redwood Co	320
11	SOUTH OF VAN DUZEN RIVER ABOUT 0.5 MILE DOWNSTREAM OF BLUE SLIDE CREEK, WEST OF HWY 36, 1 AIR MILE S OF RIVERSIDE PARK.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 11)	30-Jan-2015	NE POLYGON: 150 PLANTS SEEN IN 1999, 0 IN 2009, 2012, 2013 & 2015. W POLY: 30 PLANTS IN 2004. W AND MIDDLE POLYS: 24 PLANTS IN 2009, 8 IN 2012, 1 IN 2013, 0 IN 2015. SE POLY: 12 PLANTS IN 2005, 0 IN 2009, 11 IN 2013, 19 IN 2015.	TIMBER MANAGEMENT, TRAFFIC AND ROAD WORK, DIVERSION OF WATER OFF ROAD, COMPETITION W/ EXOTICS, REVEGETATION, BRUSHING.	PVT-Humboldt Redwood Co	300
12	JUST WEST OF CHADD PRAIRIE, ABOUT 1.3 AIR MILES WNW OF REDCREST, SOUTH OF THE EEL RIVER AT SHIVELY FLAT.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 12)	18-Feb-2013	POPULATION NUMBERS FOR PARTS OF OCC: 6750 PLANTS SEEN IN 2000, 85 PLANTS IN 2004, 120 PLANTS IN 2006, 4880 PLANTS IN 2008, 1435 PLANTS IN 2010, AND 132 PLANTS IN 2012, 191 PLANTS IN 2013. ROADS BECOMING OVERGROWN. INCLUDES FORMER OCC #13.	TIMBER MANAGEMENT, MASS WASTING EVENTS, AND HEAVY TRAFFIC OR ROAD WORK DURING GROWING SEASON.	PVT-Humboldt Redwood Co	900

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
13	CUMMINGS CREEK DRAINAGE, 0.5 MI NORTH OF CUMMINGS CREEK RD ABOUT 1.6 MI EAST OF JCT WITH HWY 36, N OF VAN DUZEN RIVER.	Humboldt	Owl Creek (4012358)	CNDDDB, May 2017 (EO 14)	15-Feb-2014	GREATER THAN 100 PLANTS OBSERVED IN 1999. 25 PLANTS OBSERVED IN 2008. 4 PLANTS OBSERVED IN 2010. ROAD GRADED IN 2011, NO PLANTS FOUND IN 2012. 20 PLANTS OBSERVED ON OUTBOARD EDGE AND IN CENTER STRIP IN 2014.	TIMBER HARVEST, REOPENING/USE OF ROAD, DIVERGENCE OF PRESENT WATER SOURCE TO SITE, AND COMPETITION WITH MENTHA PULEGIUM.	PVT-Humboldt Redwood Co	1040
14	CUMMINGS CREEK ROAD ABOUT 2 MILES EAST OF HWY 36, ABOUT 4.7 AIR MILES SW OF BLACK BUTTE, NORTH OF THE VAN DUZEN RIVER.	Humboldt	Owl Creek (4012358)	CNDDDB, May 2017 (EO 15)	30-Jan-2015	POPULATION NUMBERS ARE FOR PARTS OF OCCURRENCE: 173-190 PLANTS SEEN IN 1999, 10,160 IN 2001, 4815 IN 2008, 1850 IN 2009, 2485 IN 2010, 19 IN 2011, 945 IN 2012, 165 IN 2013. 691 IN 2014, 130 IN 2015. INCLUDES FORMER OCC #16.	TIMBER MGMT, RD MAINT, EXOTICS, WATER BAR MAINT, VEHICLE TRAFFIC, TRASH DUMPING, ATV/MOTOR-CYCLE USE, VEG OVERGROWTH.	PVT-Humboldt Redwood Co	700
15	EAST OF THE VAN DUZEN RIVER, ABOUT 0.9 MILE UPSTREAM FROM CONFLUENCE WITH FLANIGAN CREEK, 6 MILES SW OF BLACK BUTTE.	Humboldt	Owl Creek (4012358)	CNDDDB, May 2017 (EO 17)	30-Jan-2015	APPROXIMATELY 1230 PLANTS OBSERVED IN 2000, 294 PLANTS IN 2009, 336 PLANTS IN 2010, 312 PLANTS IN 2011, 3 PLANTS IN 2012, 99 PLANTS IN 2013, 77 IN 2015.	TRAFFIC, TIMBER MANAGEMENT, ROAD RECONSTRUCTION, HYDROLOGICAL CHANGES, GRASS/FORB DOMNINANCE, ATV USE.	PVT-Humboldt Redwood Co	250

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
16	BURNT RANCH CAMPGROUND, BETWEEN HWY 299 AND THE TRINITY RIVER, ABOUT 0.3 MILE WEST OF BURNT RANCH FALLS, TRINITY NF.	Trinity	Ironside Mtn. (4012374)	CNDDDB, May 2017 (EO 18)	1-Jan-2006	>1500 PLANTS IN 2000 IN AN AREA 75' BY 10' BY ERWIN; 50-100 SEEN BY BENCIE AT PAVED TURNOUT AT CAMPGROUND. PLANTS NOT IN TIRE TRACKS DENSE, HEALTHY. >10,000 PLANTS IN 2004. UNK # OF PLANTS SEEN BETWEEN 2005 AND 2006. FURTHEST INLAND POP.	VEHICLES DRIVE OVER PLANTS REGULARLY, ALTHOUGH ROAD LESS USED DURING THE WET SEASON WHEN PLANTS ARE PRESENT.	Shasta-Trinity NF	1380
17	MONUMENT CREEK, VICINITY OF GIACOMINI PRAIRIE, ABOUT 2 AIR MILES NNE OF MT. PIERCE, SOUTH OF THE EEL RIVER & SCOTIA.	Humboldt	Scotia (4012441)	CNDDDB, May 2017 (EO 19)	30-Jan-2015	POPULATION NUMBERS ARE FOR PARTS OF OCCURRENCE. IN 2000 ~464 PLANTS SEEN BETW THIS EO AND EO #20. 73 PLANTS IN 2001, 5 IN 2003, 22 IN '04, 50 IN '06, 1383 IN '08, 2133 IN '10, 124 IN '11, 390 IN '12, 527 IN '13, 985 IN '14, 301 IN '15.	TIMBER MANAGEMENT, CATTLE GRAZING, HYDROLOGICAL CHANGES, ROAD USE / RECONSTRUCTION / MAINTENANCE.	PVT-Humboldt Redwood Co	1050
18	MONUMENT CREEK, WEST END OF MONUMENT RIDGE, ABOUT 0.5 MILE NNE OF MT. PIERCE SUMMIT, SOUTH OF SCOTIA & THE EEL RIVER.	Humboldt	Scotia (4012441)	CNDDDB, May 2017 (EO 20)	18-Feb-2013	ABOUT 464 PLANTS OBSERVED IN 2000 BETWEEN THIS OCCURRENCE AND OCCURRENCE #19. 3 PLANTS OBSERVED IN 2012. 1 PLANT OBSERVED IN 2013.	TIMBER MANAGEMENT, CATTLE GRAZING, HYDROLOGICAL CHANGES, ROAD USE/RECONSTRUCTION/MAINTENANCE.	PVT-Humboldt Redwood Co	1972

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19	ALONG POWERLINE CORRIDOR JUST EAST OF FRESHWATER, ABOUT 0.5 MILE EAST OF GARFIELD SCHOOL, SOUTH OF ARCATA.	Humboldt	Arcata South (4012471)	CNDDDB, May 2017 (EO 21)	22-May-1999	1 PLANT OBSERVED IN 1999. NO PLANTS SEEN IN 2011, 2012 OR 2015.	TIMBER HARVEST, POWERLINE MAINTENANCE, RE-OPENING OF ROAD, DIVERGENCE OF WATER SOURCE, COMPETITION, ATVS, TRAIL USE.	PVT-Humboldt Redwood Co	240
20	NORTHEAST OF RIVERSIDE PARK, NORTH OF VAN DUZEN RIVER, 0.7 TO 1.0 MILE NNE OF RIVERMILE 13.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 22)	30-Jan-2015	3,000 PLANTS OBSERVED IN 2000. 1635 PLANTS OBSERVED IN 2008. 6050 PLANTS OBSERVED IN 2009. 3558 PLANTS OBSERVED IN 2010. 268 PLANTS OBSERVED IN N-MOST POLY IN 2011. 2394 PLANTS IN 2012, 3078 PLANTS IN 2013, 3381 IN 2015.	SURROUNDING LAND USE IS TIMBER PRODUCTION. ROADSIDE OCCURRENCE, LOGGING TRUCK TRAFFIC.	PVT-Humboldt Redwood Co	300
21	HEAD OF THOMPSON CREEK, ABOUT 2 AIR MILES NNE OF CONFLUENCE WITH THE EEL RIVER, NNE OF MYERS FLAT.	Humboldt	Myers Flat (4012337)	CNDDDB, May 2017 (EO 23)	17-Feb-2012	2000 PLANTS OBSERVED IN 2002. 36 PLANTS OBSERVED IN 2010. 18 PLANTS OBSERVED IN 2011. 32 PLANTS OBSERVED IN 2012.	ROAD MAINTENANCE/ RECONSTRUCTION. DISTURBED BY COW TRACKS AND ATV USE.	PVT-Humboldt Redwood Co	2165
22	JUST SOUTH OF THE VAN DUZEN RIVER, 0.5 AIR MILE SOUTHEAST OF HIGHWAY 36 CROSSING, SOUTHEAST OF LARABEE VALLEY.	Humboldt	Larabee Valley (4012346)	CNDDDB, May 2017 (EO 24)	15-Apr-2002	50 PLANTS SEEN IN 2002.	TIMBER HARVEST ACTIVITIES, RANCH ROAD MANAGEMENT, AND CATTLE GRAZING.	PVT-Cottrell Ranch	2400

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23	SOUTH SIDE OF LARABEE CREEK, JUST DOWNSTREAM FROM CONFLUENCE OF SCOTT CREEK, SOUTHWEST OF BRIDGEVILLE.	Humboldt	Bridgeville (4012347)	CNDDDB, May 2017 (EO 25)	18-Feb-2013	754 PLANTS OBSERVED IN 2001. 1290 PLANTS OBSERVED IN 2011. 3000 PLANTS OBSERVED IN 2012. 3024 PLANTS OBSERVED IN 2013.	TIMBER HARVEST ACTIVITIES, ROAD USE AND ROAD WORK.	PVT-Humboldt Redwood Co	400
24	EAST OF MOUNT BALDY, SOUTH OF LARABEE CREEK, APPROXIMATELY 6.5 AIR MILES SSW OF BRIDGEVILLE.	Humboldt	Bridgeville (4012347)	CNDDDB, May 2017 (EO 26)	18-Feb-2013	POPULATION NUMBERS ARE FOR PARTS OF OCC:. >10,000 PLANTS SEEN IN 2002, 375,223 PLANTS IN 2004, 31 IN 2006, 300 IN 2007, 100,374 IN 2008, 29,563 IN 2010, 7578 IN 2013. SITE QUALITY WITHIN OCC RANGES FROM POOR TO EXCELLENT.	ROAD MAINTENANCE AND CONSTRUCTION/RECONSTRUCTION. LAND MANAGED FOR TIMBER PRODUCTION AND CATTLE GRAZING.	PVT-Humboldt Redwood Co	2800
25	WEST OF VAN DUZEN COUNTY PARK, SOUTH OF STRONGS STATION, SOUTH AND WEST OF HIGHWAY 36 AND THE VAN DUZEN RIVER.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 27)	1-Jan-2002	MAIN SOURCE OF INFORMATION FOR THIS SITE IS 2002 DIGITAL DATA FROM PALCO, UNKNOWN NUMBER OF PLANTS SEEN IN 2002. NO PLANTS FOUND IN 2011 AND 2013.	ROAD RECENTLY USED AND GRADED (2011).	PVT-Humboldt Redwood Co	270

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26	CHALK MOUNTAINS, UPPER ROOT CREEK DRAINAGE, 3.3 AIR MILES ESE OF CONFLUENCE WITH THE VAN DUZEN RIVER, NW OF REDCREST.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 28)	15-Feb-2014	6 PLANTS OBSERVED IN 2002. 0 PLANTS FOUND IN 2009. 3 PLANTS OBSERVED IN 2011. 10 PLANTS OBSERVED IN 2012. 19 PLANTS OBSERVED IN 2014; PLANTS IN SAME LOCATION AS IN 2011, NO PLANTS FOUND UPHILL AT 2002 LOCATION.	ROAD MAINTENANCE AND CONSTRUCTION/ RECONSTRUCTION.	PVT-Humboldt Redwood Co	1240
27	HORSE PRAIRIE, ALONG PEAVINE ROAD, JUST NORTH OF HUMBOLDT REDWOODS STATE PARK BOUNDARY, SOUTH OF REDCREST.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 29)	18-Feb-2013	WESTERN POLYGON: 7 PLANTS SEEN IN 2002. EASTERN POLYGON: 170 PLANTS SEEN IN 2010, 136 PLANTS SEEN IN 2011, 7 PLANTS SEEN IN 2012, 31 PLANTS SEEN IN 2013.	ROAD MAINTENANCE AND CONSTRUCTION/ RECONSTRUCTION. RECENT LOGGING (2013).	PVT-Humboldt Redwood Co	1480
28	UPPER HELY CREEK DRAINAGE, RIDGE BETWEEN HELY & SOUTH FORK YAGER CREEK, 1.7 MI WSW OF REDWOOD HOUSE, VAN DUZEN DRAINAGE.	Humboldt	Owl Creek (4012358)	CNDDDB, May 2017 (EO 30)	30-Jan-2015	10 PLANTS OBSERVED IN 2001. 37 PLANTS IN 2009. 142 IN 2011. 160 IN 2012. 87 PLANTS IN 2013. 37 PLANTS IN 2014, 3 PLANTS IN 2015.	TIMBER HARVEST ACTIVITIES, ROAD MAINTENANCE/ CONSTRUCTION, DENSE VEGETATION.	PVT-Humboldt Redwood Co	1700

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29	RIDGE SOUTH OF FOX CREEK, ABOUT 0.9 AIR MILE NORTHEAST OF CONFLUENCE WITH THE VAN DUZEN RIVER, NORTH OF HIGHWAY 36.	Humboldt	Owl Creek (4012358)	CNDDDB, May 2017 (EO 31)	24-Apr-2002	10 PLANTS OBSERVED IN 2002. NO PLANTS FOUND IN 2011, 2012, OR 2014. 2014 SURVEY FORM NOTES, "ROAD UPGRADED AND GRAVEL ADDED A FEW YEARS AGO."	TIMBER HARVEST ACTIVITIES, ROAD MAINTENANCE/ CONSTRUCTION.	PVT-Humboldt Redwood Co	680
30	HEAD OF FLANIGAN CREEK, 0.7 TO 1.25 AIR MILES ENE OF CONFLUENCE WITH THE VAN DUZEN RIVER, EAST OF HIGHWAY 36.	Humboldt	Owl Creek (4012358)	CNDDDB, May 2017 (EO 32)	15-Feb-2014	POPULATION NUMBERS ARE FOR PORTIONS OF OCCURRENCE: 56 PLANTS OBSERVED IN 2001, 0 PLANTS IN 2009 (ENTIRE OCCURRENCE), 31 PLANTS IN 2011, 28 PLANTS IN 2012, 275 PLANTS IN 2014. INCLUDES FORMER EO #33.	TIMBER HARVEST ACTIVITIES, ROAD MAINTENANCE/ CONSTRUCTION.	PVT-Humboldt Redwood Co	800
31	SOUTH SIDE OF BLUE SLIDE CREEK, ABOUT 1.25 AIR MILES WEST OF CONFLUENCE WITH THE MAD RIVER, NORTH OF THE IAQUA BUTTES.	Humboldt	Iaqua Buttes (4012368)	CNDDDB, May 2017 (EO 34)	17-Feb-2012	ABOUT 2500 PLANTS OBSERVED IN 2001. 388 PLANTS OBSERVED IN 2011. 450 PLANTS OBSERVED IN 2012.	TIMBER HARVEST ACTIVITIES, ROAD MAINTENANCE/ CONSTRUCTION.	PVT-Humboldt Redwood Co	785

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32	SOUTH SIDE OF BOOTHS RUN, ABOUT 0.1 TO 0.4 MILE WSW OF BOOTHS RUN CROSSING, NORTH OF IAQUA BUTTES.	Humboldt	Iaqua Buttes (4012368)	CNDDDB, May 2017 (EO 35)	30-Jan-2015	POPULATION NUMBERS ARE FOR PARTS OF OCCURRENCE: 1000 PLANTS OBSERVED IN 2002, 500 PLANTS IN 2004, 3548 PLANTS IN 2008, 578 PLANTS IN 2010, 1194 PLANTS IN 2011, AND 97 PLANTS IN 2012. 89 PLANTS IN 2013, 459 IN 2015.	TIMBER HARVEST ACTIVITIES, ROAD MAINTENANCE/ CONSTRUCTION, AND ATV USE.	PVT-Humboldt Redwood Co	1900
33	SOUTH SLOPE OF BOOTHS RUN CANYON, 1.6 AIR MI ESE OF CONFLUENCE WITH LAWRENCE CREEK, NORTHEAST OF HYDESVILLE.	Humboldt	Iaqua Buttes (4012368)	CNDDDB, May 2017 (EO 36)	15-Feb-2014	450-500 PLANTS OBSERVED IN 2002. 9 PLANTS OBSERVED IN 2008. NO PLANTS FOUND IN 2011 OR 2012. 2 PLANTS OBSERVED IN 2014.	TIMBER HARVEST ACTIVITIES, ROAD MAINTENANCE/ CONSTRUCTION, AND ATV USE.	PVT-Humboldt Redwood Co	1800
34	HAWKINS BAR STORE, NORTH OF HIGHWAY 299 AND SOUTH OF THE TRINITY RIVER, UPSTREAM FROM TRINITY VILLAGE.	Trinity	Hennessy Peak (4012375)	CNDDDB, May 2017 (EO 37)	20-Mar-2004	MORE THAN 20,000 PLANTS, IN 2004. SITE HIGHLY THREATENED, OWNER COULD PAVE, GRADE OR OTHERWISE CHANGE SURFACE OF PARKING LOT AT ANY TIME. REMOVAL OF ALL OR PART OF TREE CANOPY ON SOUTH SLOPE COULD EASILY ELIMINATE ENTIRE POPULATION.	AREA IS USED AS PARKING LOT, ALTHOUGH MODERATE TRAFFIC, TIRE TRACKS, CURRENT USE APPEARS COMPATIBLE WITH MAINTENANCE.	PVT-Pacific Lumber Co	775

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
35	RIDGE WEST OF MAPLE CREEK, ABOUT 1.1-1.5 AIR MILES NORTH OF CONFLUENCE OF MAPLE CREEK AND THE MAD RIVER, SE OF KORBEL.	Humboldt	Korbel (4012378)	CNDDDB, May 2017 (EO 38)	27-Apr-2001	ABOUT 10,050 PLANTS SEEN IN 2001. SEASONAL (DRY PERIOD) ROAD MAINTENANCE AND USE APPEARS TO HELP MAINTAIN HABITAT WHEN SPECIES IS DONE WITH LIFE CYCLE.	TIMBER HARVEST ACTIVITIES AND ROAD RECONSTRUCTION.	PVT	700
36	EAST OF NORTH END OF EVERTS RIDGE, ABOUT 2 AIR MILES NORTHEAST OF ARCHER WAY COUNTY MEMORIAL PARK ON THE MATTOLE RIVER.	Humboldt	Buckeye Mtn. (4012432)	CNDDDB, May 2017 (EO 39)	8-Feb-2011	1000 PLANTS OBSERVED IN 2003. 150 PLANTS OBSERVED IN 2011. NEEDS SURVEY OF SURROUNDING AREA.	TIMBER HARVEST ACTIVITIES, COWS, ATV USE.	PVT-Humboldt Redwood Co	1120
37	JORDAN CREEK, SOUTH OF HIGHWAY 101 CROSSING, SOUTH OF THE EEL RIVER AT ELINOR FLAT, SOUTHEAST OF STAFFORD.	Humboldt	Scotia (4012441)	CNDDDB, May 2017 (EO 40)	30-Jan-2015	MORE THAN 9000 PLANTS ESTIMATED IN 2002. 13,047 PLANTS OBSERVED IN 2009. 8000 PLANTS IN 2010; ENTIRE OCCURRENCE NOT REVISITED. 4456 PLANTS IN 2012. 4250 PLANTS IN 2013. 658 PLANTS IN THE WESTERN POLY IN 2014. 7119 PLANTS IN 2015.	TIMBER HARVEST ACTIVITIES, ROAD MAINTENANCE/ CONSTRUCTION, ATV USE. SOME MONTIA AREAS MAY BE GETTING CROWDED OUT.	PVT-Humboldt Redwood Co	200

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
38	WEST OF BEAR CREEK, ABOUT 1 AIR MILE EAST OF HARROW PRAIRIE, SOUTH OF STAFFORD.	Humboldt	Scotia (4012441)	CNDDDB, May 2017 (EO 41)	15-Feb-2014	IN THE E PORTION OF POLYGON, 100+ PLANTS OBSERVED IN 2001, 9 PLANTS IN 2011, 1 PLANT IN 2012 (SITE RECENTLY GRADED), NO PLANTS IN 2013 OR 2014. IN THE MIDDLE AND W PORTIONS OF POLYGON, 4 PLANTS SEEN IN 2014; ROAD WAS BECOMING OVERGROWN.	TIMBER HARVEST ACTIVITIES, ROAD MAINTENANCE/ CONSTRUCTION.	PVT-Humboldt Redwood Co	1280
39	HOWE CREEK DRAINAGE ALONG JEEP TRAIL J20.66, ABOUT 1 AIR MILE SSE OF HACKETSVILLE, EEL RIVER WATERSHED.	Humboldt	Taylor Peak (4012442)	CNDDDB, May 2017 (EO 42)	11-Apr-2001	2 PLANTS SEEN ON 4/11/2001, PLANTS NO LONGER APPARENT ON 5/8/2001. NO PLANTS FOUND IN 2010 AND 2013. THE RARE USNEA LONGISSIMA AND SIDALCEA MALACHROIDES ALSO OCCUR ON THIS SITE.	TIMBER HARVEST ACTIVITIES, ROAD MAINTENANCE/ CONSTRUCTION. COWS MAY BE HELPING KEEP ROAD OPEN (2013).	PVT-Humboldt Redwood Co	1080
40	BETWEEN MONUMENT ROAD AND MONUMENT CREEK, ABOUT 1.5 AIR MILES NNE OF MT. PIERCE, SOUTHWEST OF SCOTIA.	Humboldt	Taylor Peak (4012442)	CNDDDB, May 2017 (EO 43)	4-Mar-2002	97 PLANTS SEEN IN 2002. NO PLANTS FOUND IN 2011-2013, THOUGH SUITABLE HABITAT IS STILL PRESENT.	TIMBER HARVEST ACTIVITIES, ROAD MAINTENANCE/ CONSTRUCTION.	PVT-Humboldt Redwood Co	2100

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
41	SOUTH OF THE EEL RIVER, ABOUT 0.6 AIR MILE SOUTHEAST OF MCCANN, SOUTHEAST OF THOMPSON FLAT.	Humboldt	Myers Flat (4012337)	CNDDDB, May 2017 (EO 44)	15-Feb-2014	959 PLANTS OBSERVED IN 2003. 110 PLANTS OBSERVED IN 2011. 300 PLANTS OBSERVED IN 2012. 600 PLANTS OBSERVED IN 2014. LANDING WHERE PLANTS ARE LOCATED IS BEING ENCROACHED UPON BY OTHER SHRUBBY SPECIES.	TIMBER HARVEST ACTIVITIES.	PVT-Humboldt Redwood Co	600
42	WEST SIDE OF FOX CREEK, ABOUT 0.5 MILE NORTH OF HIGHWAY 36, NORTH OF THE VAN DUZEN RIVER.	Humboldt	Hydesville (4012451)	CNDDDB, May 2017 (EO 45)	30-Jan-2015	POPULATION NUMBERS ARE FOR PARTS OF OCCURRENCE: 1766 PLANTS SEEN IN 2003, 650 PLANTS SEEN IN 2004, 17 PLANTS SEEN IN 2007, 5122 PLANTS IN 2009, 557 PLANTS IN 2012, 375 IN 2013, 1611 IN 2015.	TIMBER HARVEST ACTIVITIES. FREQUENT FOOT AND ATV USE. AREA USED AS A DUMP SITE. GRADING, NEW BARRIER INSTALLED (2013).	PVT-Humboldt Redwood Co	300
43	ALONG EAST SIDE OF FRANCIS CREEK, ABOUT 0.9 AIR MILE SOUTHEAST OF SUMMIT OF SUGARLOAF MOUNTAIN, SOUTH OF FERNDALE.	Humboldt	Ferndale (4012453)	CNDDDB, May 2017 (EO 46)	6-Mar-2015	3177 PLANTS SEEN IN 2001. UNKNOWN NUMBER SEEN IN 2008 AND 2013. 103 PLANTS SEEN IN 2015. INCLUDES FORMER OCCURRENCE #47.	ROAD USE, TIMBER HARVEST ACTIVITIES, CATTLE MOVEMENT. THESE ACTIVITIES CAN ALSO HELP MAINTAIN HABITAT FOR MONTIA.	PVT	400

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
44	NORTH OF THE NORTH FORK ELK RIVER, ABOUT 1.2 AIR MILES EAST OF CONFLUENCE WITH SOUTH FORK, EAST OF JONES PRAIRIE.	Humboldt	Fields Landing (4012462)	CNDDDB, May 2017 (EO 48)	30-Jan-2015	POPULATION NUMBERS ARE FOR PARTS OF OCCURRENCE: 154 PLANTS SEEN IN 2002, 250 PLANTS SEEN IN 2004, 1323 PLANTS SEEN IN 2009, 1765 PLANTS ESTIMATED IN 2010, 2861 PLANTS SEEN IN 2012, 2950 PLANTS SEEN IN 2013, 943 IN 2015.	ROAD MAINTENANCE AND CONSTRUCTION/ RECONSTRUCTION. SURROUNDING LAND USED FOR TIMBER PRODUCTION AND ARCHERY RANGE.	PVT-Humboldt Redwood Co	150
45	ALONG LOGGING ROADS NE OF SALMON CREEK ROAD, FROM 2 TO 4 AIR MILES EAST OF TABLE BLUFF.	Humboldt	Fields Landing (4012462)	CNDDDB, May 2017 (EO 49)	31-Mar-2008	20,000 TO 31,000 PLANTS ESTIMATED IN 2001. 15,007 PLANTS OBSERVED IN 2006. 22592 PLANTS OBSERVED IN 2007. 13631 PLANTS OBSERVED IN 2008. INCLUDES FORMER OCCURRENCES #50, 51, 52, AND 54. SEE CNDDDB FOR POPULATION DETAILS.	ROAD MAINTENANCE & CONSTRUCTION/ RECONSTRUCTION, TIMBER HARVEST ACTIVITIES, INVASIVE SPECIES, & POSSIBLE HERBIVORY.	PVT-Green Diamond Resource Co	500
46	SOUTH OF SALMON CREEK, ABOUT 2.6 AIR MILES SE OF JUNCTION OF SALMON CREEK AND PALMER CREEK ROADS, SSE OF FIELDS LANDING.	Humboldt	Fields Landing (4012462)	CNDDDB, May 2017 (EO 53)	1-Apr-2001	1 PLANT SEEN IN 2001.	ROAD MAINTENANCE AND CONSTRUCTION/ RECONSTRUCTION, TIMBER HARVEST ACTIVITIES, INVASIVE SPECIES, AND POSSIBLE HERBIVORY.	PVT-Green Diamond Resource Co	650

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
47	MCKAY TRACT, ROAD ALONG GUPTIL GULCH, ABOUT 0.2-1.5 MILE UPSTREAM FROM RYAN CREEK, SOUTH OF ARCATA.	Humboldt	Arcata South (4012471)	CNDDDB, May 2017 (EO 55)	17-Apr-2004	122 PLANTS OBSERVED IN 2001. IN 2004 2 PLANTS OBSERVED AT BOTH FAR W COLONY AND SECONDMOST E COLONY. NO PLANTS SEEN IN ANY OF THESE COLONIES IN 2006, 2007, AND 2009. AREA HAS BEEN EXTENSIVELY GRAVELLED, BUT GOOD HABITAT SEEN IN 2009.	ROAD CONSTRUCTION/ MAINTENANCE. SURROUNDING LAND IS MANAGED FOR TIMBER PRODUCTION.	PVT- Green Diamond Resource Co	120
48	SOUTHWESTER N WINCHESTER RIDGE, 0.2 AIR MILE NORTHEAST OF HELMKE SPRING, NW OF HOLE IN THE GROUND, WEST OF THE EEL RIVER.	Humboldt	Fort Seward (4012326)	CNDDDB, May 2017 (EO 56)	21-May-2003	ABOUT 200 PLANTS SEEN IN 2003. SITE LABELED "UNAVOIDABLE" ON MAP, PLANTS MAY BE AFFECTED BY WATERSHED IMPROVEMENT PROJECT.	ROAD REHABILITATION /UPGRADE. VIA AGREEMENT WITH DFG, NO PLANTS WILL BE HARMED THROUGH IMPLEMENTATION OF PROJECT.	PVT	2600
49	WEST OF HOLE IN THE GROUND, 0.4 AIR MILE SSE OF HELMKE SPRING, SOUTH OF WINCHESTER RIDGE, WEST OF THE EEL RIVER.	Humboldt	Fort Seward (4012326)	CNDDDB, May 2017 (EO 57)	21-May-2003	ABOUT 400 PLANTS SEEN IN 2003. SITE LABELED "AVOIDABLE WITH PRECAUTIONS" ON MAP.	ROAD REHABILITATION /UPGRADE. VIA AGREEMENT WITH DFG, NO PLANTS WILL BE HARMED THROUGH IMPLEMENTATION OF PROJECT.	PVT	2500

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
50	ALONG DECOMISSIONED DOLLY VARDEN RD, ABOUT 1 AIR MILE WNW OF CONFLUENCE OF ROARING GULCH AND REDWOOD CREEK.	Humboldt	Panther Creek (4112318)	CNDDDB, May 2017 (EO 58)	23-Mar-2004	30-50 PLANTS OBSERVED IN 2003. 63 PLANTS OBSERVED IN 2004. SINCE 2004 THE AREA HAS BECOME MORE DENSELY VEGETATED; SITE RELOCATED BUT NO PLANTS FOUND IN 2009.	TIMBER HARVEST ACTIVITIES. PLANTS COULD POTENTIALLY BE TRAMPLED.	PVT-Green Diamond Resource Co	900
51	0.6 AIR MILE SW OF BLOCKSBERG.	Humboldt	Blocksburg (4012336)	CNDDDB, May 2017 (EO 59)	20-May-2005	2300-4250 ESTIMATED PLANTS OBSERVED IN 2005 BETWEEN THIS OCCURRENCE AND OCCURRENCES #60 AND #61 COMBINED.	ROAD CONSTRUCTION / MAINTENANCE. SURROUNDING LAND IS MANAGED FOR TIMBER PRODUCTION.	PVT	1600
52	1.2 AIR MILES SW OF BLOCKSBERG.	Humboldt	Blocksburg (4012336)	CNDDDB, May 2017 (EO 60)	20-May-2005	2300-4250 ESTIMATED PLANTS OBSERVED IN 2005 BETWEEN THIS OCCURRENCE AND OCCURRENCES #59 AND #61 COMBINED.	ROAD CONSTRUCTION / MAINTENANCE. SURROUNDING LAND IS MANAGED FOR TIMBER PRODUCTION.	PVT	1400
53	2.2 AIR MILES SW OF BLOCKSBERG.	Humboldt	Blocksburg (4012336)	CNDDDB, May 2017 (EO 61)	20-May-2005	2300-4250 ESTIMATED PLANTS OBSERVED IN 2005 BETWEEN THIS OCCURRENCE AND OCCURRENCES #59 AND #60 COMBINED.	ROAD CONSTRUCTION / MAINTENANCE. SURROUNDING LAND IS MANAGED FOR TIMBER PRODUCTION.	PVT	1200

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
54	WEST SIDE OF UPPER SCOTT CREEK, APPROXIMATELY 0.7 AIR MILE NORTHEAST OF THE SUMMIT OF MOUNT BALDY.	Humboldt	Bridgeville (4012347)	CNDDDB, May 2017 (EO 62)	30-Jan-2015	134 PLANTS OBSERVED IN 2004. 233 PLANTS OBSERVED IN 2010. 4 PLANTS OBSERVED IN 2012. NO PLANTS FOUND IN 2013. 130 PLANTS IN 2015.	ROAD CONSTRUCTION/ MAINTENANCE. TIRE RUTS IN OCCURRENCE. SURROUNDING LAND IS MANAGED FOR TIMBER PRODUCTION.	PVT-Humboldt Redwood Co	2030
55	APPROXIMATELY 0.6 AIR MILE NNE OF THE CONFLUENCE OF FOX CREEK WITH THE VAN DUZEN RIVER, NORTH OF RIVERSIDE PARK.	Humboldt	Owl Creek (4012358)	CNDDDB, May 2017 (EO 63)	17-Feb-2004	2 PLANTS OBSERVED IN 2004. NO PLANTS FOUND IN 2011, 2012, OR 2014.	SURROUNDING LAND IS MANAGED FOR TIMBER PRODUCTION.	PVT-Humboldt Redwood Co	600
56	NORTH OF BOULDER CREEK, 2 AIR MILES SOUTH OF LAKE PRAIRIE.	Humboldt	Maple Creek (4012377)	CNDDDB, May 2017 (EO 64)	6-May-2013	1000 PLANTS OBSERVED IN 2001 AND 2013. ROAD IS COMPLETELY DRIED UP CAUSING YELLOWING OF MOST INDIVIDUALS (2013).	SURROUNDING LAND IS MANAGED FOR TIMBER PRODUCTION. THREATENED BY GRAVELING OF ROAD.	PVT-Green Diamond Resource Co	3300
57	JUST SOUTH OF THE MOUTH OF EAST FORK WILLOW CREEK.	Humboldt	Willow Creek (4012386)	CNDDDB, May 2017 (EO 65)	14-Apr-2004	>500 PLANTS OBSERVED IN 2004.	GROWING IN PARKING AND TURN AROUND AREAS IN A PUBLIC USE AREA, BUT AREA IS CLOSED TO TRAFFIC DURING THE GROWING SEASON.	Six Rivers NF	1600
58	Six Rivers NF	Humboldt	Willow Creek (4012386)	NRIS, Feb 2017 (51033900 2)	14-Apr-2004	500 individuals		Six Rivers NF	

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
59	2.3 AIR MILES NORTH OF ELK RIVER SCOUT CAMP.	Humboldt	McWhinney Creek (4012461)	CNDDDB, May 2017 (EO 68)	7-May-2004	10 PLANTS OBSERVED IN 2004. NO PLANTS FOUND IN 2006 OR 2007, BUT SUITABLE HABITAT STILL PRESENT. NO PLANTS FOUND IN 2009; AREA WAS FAIRLY DENSELY VEGETATED WITH WEEDY SPECIES.	ROAD CONSTRUCTION/ MAINTENANCE. AREA IS MANAGED FOR TIMBER PRODUCTION. DENSELY VEGETATED WITH WEEDY SPECIES.	PVT-Green Diamond Resource Co	700
60	0.9 AIR MILE NE OF RIDGEWOOD HEIGHTS. ALONG A GAME TRAIL ALONG ROAD R-10.	Humboldt	Fields Landing (4012462)	CNDDDB, May 2017 (EO 70)	17-Apr-2004	10 PLANTS IN THIS OCCURRENCE IN 2004. NO PLANTS OBSERVED IN 2006; VERY OVERGROWN WITH GRASSES AND LOTS OF FALLEN TREES COVERING ROAD.	AREA IS MANAGED FOR TIMBER PRODUCTION; COMPETITION FROM OTHER (NON-NATIVE?) PLANTS.	PVT-Green Diamond Resource Co	200
61	ROUGHLY 0.8 AIR MILE ENE OF MARTINS FERRY BRIDGE OVER THE KLAMATH RIVER.	Humboldt	Weitchpec (4112326)	CNDDDB, May 2017 (EO 71)	12-Apr-2006	PLANT POP'S OBS IN POLYGONS RANGING FROM NORTH TO SOUTH: 2000 IN 1ST POLY IN 2005. 10 IN THE N 1/2 OF 2ND POLY IN 2005. 1000 IN THE S 1/2 OF 2ND POLY IN 2004. 2000 IN 3RD POLY IN 2005. 302 IN 4TH POLY IN 2005. 112 IN 4TH POLY IN 2006.	ROAD CONSTRUCTION / MAINTENANCE. ROADSIDE HERBICIDE APPLICATION. LAND IS MANAGED FOR TIMBER PRODUCTION. EROSION.	PVT-Green Diamond Resource Co	1600
62	1.5 AIR MILES NW OF WILDCAT BUTTE, NE OF PHILLIPSVILLE.	Humboldt	Fort Seward (4012326)	CNDDDB, May 2017 (EO 72)	17-May-2005	TOTAL OF 675 PLANTS OBSERVED IN 2005. ROADBED IS BEING DECOMMISSIONED FOR SALMONID HABITAT IMPROVEMENT.	ROAD DECOMMISSIONING WILL ALTER HYDROLOGY SO THAT THE HABITAT MAY NO LONGER BE SUITABLE FOR THIS SPECIES.	PVT	600

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
63	ALONG JEEP TRAIL 1 AIR MILE SW OF WILDCAT BUTTE, NW OF PHILLIPSVILLE.	Humboldt	Fort Seward (4012326)	CNDDDB, May 2017 (EO 73)	20-May-2005	20 PLANTS IN WESTERN COLONY AND 300 PLANTS IN EASTERN COLONY IN 2005. ROADBED IS BEING DECOMMISSIONED FOR SALMONID HABITAT IMPROVEMENT.	ROAD DECOMMISSIONING WILL ALTER HYDROLOGY SO THAT THE HABITAT IS NO LONGER SUITABLE FOR THIS SPECIES.	PVT	1600
64	JUST NORTH OF HUBBARD STATION, 2 AIR MILES EAST OF PHILLIPSVILLE.	Humboldt	Fort Seward (4012326)	CNDDDB, May 2017 (EO 74)	20-May-2005	50 PLANTS OBSERVED IN EASTERN COLONY IN 2005. UNKNOWN NUMBER OF PLANTS ELIMINATED BY ROAD GRADING ASSOCIATED WITH TIMBER HARVESTING IN THE WESTERN COLONY.	ROAD DECOMMISSIONING WILL ALTER HYDROLOGY; ROAD GRADING ASSOCIATED WITH TIMBER HARVESTING ELIMINATED W COLONY.	PVT	2300
65	ALONG JEEP TRAIL 0.6 AIR MILE WSW OF AZBIL FLAT, SW OF LARABEE BUTTES.	Humboldt	Larabee Valley (4012346)	CNDDDB, May 2017 (EO 75)	23-May-2005	APPROXIMATELY 300 PLANTS OBSERVED IN 2005. CULVERT REPLACEMENT IS PART OF SEDIMENT REDUCTION/EROSION CONTROL PROJECT TO RESTORE SALMONID HABITAT. LANDOWNER DOES NOT USE THE ROAD DURING THE WET SEASON.	CHANGES IN HYDROLOGY DUE TO CULVERT REPLACEMENT AND ROAD MAINT, WET WEATHER ROAD USE, AND IMPROPER ROAD MGMT.	PVT	2600

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
66	SOUTHERN EDGE OF BARKDULL PRAIRIE, 2 AIR MILES SOUTH OF STAFFORD.	Humboldt	Scotia (4012441)	CNDDDB, May 2017 (EO 76)	15-Feb-2014	2012 PLANTS OBSERVED AT THE NORTHERN END OF THE POLYGON IN 2007. 10,841 PLANTS IN 2009. 5072 PLANTS IN 2012. 6000 PLANTS ESTIMATED IN 2013. IN 2014, NO PLANTS FOUND IN THE N PORTION OF OCCURRENCE; 2963 PLANTS THROUGHOUT REST OF OCCURRENCE.	THREATENED BY COWS AND SURROUNDING TIMBER HARVEST. SOME MONTIA OCCUPIED AREAS ARE BEING OVERGROWN IN 2009.	PVT-Humboldt Redwood Co	1800
67	ALONG UNNAMED ROAD 1.1 AIR MILES NW OF THREE CABINS, ON NW SIDE OF GRAHAM RIDGE.	Humboldt	Mad River Buttes (4012367)	CNDDDB, May 2017 (EO 77)	1-Jan-2011	50 PLANTS OBSERVED IN 2005. 150 PLANTS OBSERVED IN 2007. UNKNOWN NUMBER OF PLANTS OBSERVED IN 2011. THE LAND IS MANAGED FOR TIMBER AND CATTLE GRAZING.	DISTURBANCE BY VEHICLES ON ROAD.	PVT-Green Diamond Resource Co	2365
68	SOUTHERN END OF MURPHY MEADOWS APPROXIMATELY 0.75 MILE WEST OF SNOWCAMP ROAD.	Humboldt	Maple Creek (4012377)	CNDDDB, May 2017 (EO 78)	25-Apr-2007	1000 PLANTS OBSERVED IN 2007. APPROPRIATE MITIGATION STRATEGIES WILL BE SET IN PLACE TO PROTECT THE POPULATION.	THIS ROAD WILL BE USED AS PART OF A TIMBER OPERATION PLANNED FOR AUGUST 2008.	PVT, NRM	1840
69	0.9 AIR MILE WSW OF BUNKER HILL, ALONG ROADS 0.07 AIR MI W AND SW OF POINT 1463 ON TOPO.	Humboldt	Capetown (4012443)	CNDDDB, May 2017 (EO 79)	25-Apr-2007	456 PLANTS OBSERVED IN 2007.		Unknown	1500

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
70	ON HIGHWAY 36 AT POST MILE 28.18, ABOUT 0.5 ROAD MILE WEST OF EXIT TO COTTRELL RANCH.	Humboldt	Larabee Valley (4012346)	CNDDDB, May 2017 (EO 80)	19-Mar-2008	300 PLANTS OBSERVED IN 2008. ACCESS ROAD TO PRIVATE PROPERTY CREATES THIS HABITAT BY OCCASIONAL DISTURBANCE IN THE POPULATION AREA. SITE PROVIDES GOOD HABITAT AS LONG AS OCCASIONAL DISTURBANCE OCCURS.	CLOSURE OR DISCONTINUED USE OF THE ACCESS ROAD WOULD NO LONGER DISTURB THE HABITAT.	CalTrans	2200
71	S OF HORSE CRK. ~0.8 MI E OF THE CONFLUENCE OF SWIFT CRK, MULE CRK, BUTTE CRK, AND THE BUTTE CRK ACCESS RD OFF HWY 36.	Humboldt	Larabee Valley (4012346)	CNDDDB, May 2017 (EO 81)	23-Apr-2008	PRECISE NUMBER OF INDIVIDUALS HARD TO DETERMINE; 1,000,000 PLANTS ESTIMATED IN 2008.	SURROUNDING LAND USE IS TIMBER HARVEST.	PVT-Sierra Pacific	2500
72	ON HIGHWAY 254 (AVENUE OF THE GIANTS) AT POST MILE 40.13, JUST NORTH OF REDCREST.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 82)	25-Feb-2008	67 PLANTS OBSERVED IN 2008. HABITAT IS CREATED BY OCCASIONAL USE OF PULLOUT BY VEHICLES CREATING DISTURBED AREA WITH SEASONAL PONDING OF WATER. POPULATION EXTENT LIMITED BY LITTER FALL FROM SURROUNDING CANOPY.	CLOSURE OR DISCONTINUED USE OF THE PULLOUT WOULD NO LONGER DISTURB THE HABITAT WHICH COULD BE DETRIMENTAL.	CalTrans	280

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
73	NORTH SIDE OF GRIZZY CREEK, APPROXIMATELY 0.4 AIR MILE ENE OF CAMP BERNIS.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 83)	30-Jan-2015	5 PLANTS OBSERVED IN 2012. 15 PLANTS OBSERVED IN 2013. 30 PLANTS OBSERVED IN 2014. 12 PLANTS IN 2015; PLANTS NUMBERS DOWN FROM PREVIOUS YEAR BUT OCCURRENCE HAS SPREAD INTO LARGER AREA.	DISTURBED BY ATV USE. SURROUNDING LAND USE IS TIMBER HARVEST. SITE WILL BE GRADED IN 2014-2015.	PVT-Humboldt Redwood Co	500
74	JUST SOUTH OF HIGHWAY 36 CROSSING OF VAN DUZEN RIVER AT MILE 24, APPROXIMATELY 1 AIR MILE NORTHWEST OF SWAINS FLAT.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 84)	15-Feb-2014	150 PLANTS OBSERVED IN 2001. NO PLANTS FOUND IN 2009 OR 2012. 192 PLANTS OBSERVED IN 2014: 1 PLANT BEHIND A SLASH PILE IN LANDING, OTHERS IN SILT ON CONCRETE SURFACE OF OLD HWY BRIDGE; NONE AT HISTORIC SITE.	SURROUNDING LAND USE IS TIMBER HARVEST.	PVT-Humboldt Redwood Co	400
75	PARKING LOT ON SOUTH SIDE OF HIGHWAY 101 BETWEEN REDCREST AND ENGLEWOOD, ABOUT 1.3 AIR MILES NNE OF HORSE PRAIRIE.	Humboldt	Redcrest (4012348)	CNDDDB, May 2017 (EO 85)	18-Feb-2013	3000 PLANTS OBSERVED IN 2010. 3500 PLANTS OBSERVED IN 2013.	DISTURBED BY RECENT LIMBING OF TREES AROUND THE LOT (2013).	Unknown	388

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
76	ALONG SEASONAL ROAD AT NORTHERN END OF GRAHAM RIDGE, APPROXIMATELY 2 AIR MILES WEST OF MOUNT ANDY SUMMIT.	Humboldt	Mad River Buttes (4012367)	CNDDDB, May 2017 (EO 86)	17-May-2012	100+ PLANTS OBSERVED IN 2012.	ROAD GRADING AND DEPOSITING MATERIALS INTO DITCH OR CLEANING DITCH COULD IMPACT PLANTS. LIGHT TRAMPLING BY LIVESTOCK.	Unknown	2600
77	ROAD AND CREEK ON GRAHAM RIDGE, APPROXIMATELY 1.7 AIR MILES SOUTHWEST OF SUMMIT OF MOUNT ANDY.	Humboldt	Mad River Buttes (4012367)	CNDDDB, May 2017 (EO 87)	2-Apr-2013	6000 PLANTS ESTIMATED IN NORTHERN POLYGON IN 2011. 100 PLANTS SEEN IN MIDDLE POLYGON AND 1000 PLANTS SEEN IN SOUTHERN POLYGON IN 2013.	SURROUNDING LAND IS MANAGED FOR TIMBER. THREATENED BY ROAD USE, DEBRIS, AND TRAMPLING.	PVT-Green Diamond Resource Co	3300
78	ALONG UNNAMED ROAD ON WESTERN SIDE OF GRAHAM RIDGE, APPROXIMATELY 1 AIR MILE EAST OF THREE CABINS.	Humboldt	Mad River Buttes (4012367)	CNDDDB, May 2017 (EO 88)	29-Mar-2013	200 PLANTS OBSERVED IN NORTHERN POLYGON AND 1000+ PLANTS OBSERVED IN SOUTHERN POLYGON IN 2011. 1000+ PLANTS ESTIMATED IN 2013.	SURROUNDING LAND IS MANAGED FOR TIMBER. THREATENED BY ROAD USE.	PVT-Green Diamond Resource Co	2600
79	ALONG ROADS NEAR UPPER END OF GOODMAN PRAIRIE CREEK, BETWEEN 0.75 AND 1.75 AIR MILES SOUTHEAST OF THREE CABINS.	Humboldt	Mad River Buttes (4012367)	CNDDDB, May 2017 (EO 89)	19-Apr-2011	10,000 PLANTS ESTIMATED IN LARGE MIDDLE POLYGON IN 2010. 10,570 PLANTS OBSERVED ACROSS SITE IN 2011.	SURROUNDING LAND USE IS TIMBER HARVEST. THREATENED BY ROAD USE AND POTENTIALLY BY COW TRAMPLING.	PVT-Green Diamond Resource Co	2300

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
80	ALONG MAPLE CREEK ROAD BETWEEN GOODMAN PRAIRIE CREEK AND GRAHAM CREEK, ABOUT 1.3 AIR MILES SOUTH OF THREE CABINS.	Humboldt	Mad River Buttes (4012367)	CNDDDB, May 2017 (EO 90)	13-Apr-2012	300 PLANTS ESTIMATED IN 2007 AND 2009. 0 PLANTS FOUND IN 2010 DUE TO BUILDING OF BERM. 467 PLANTS OBSERVED IN 2011 (BERM FROM 2010 MOVED AND HABITAT RESTORED). 25 PLANTS OBSERVED IN 2012; SITE OVERGROWN WITH HERBACEOUS VEGETATION.	SURROUNDING LAND USE IS TIMBER HARVEST. THREATENED BY ROAD GRADING/MAINTENANCE AND ENCROACHING VEGETATION.	PVT-Green Diamond Resource Co	1400
81	UPPER GRAHAM CREEK, APPROXIMATELY 1.2 AIR MILES NNE OF BIG BEND RANCH.	Humboldt	Mad River Buttes (4012367)	CNDDDB, May 2017 (EO 91)	19-Apr-2011	208 PLANTS OBSERVED IN 2011.	SURROUNDING LAND USE IS TIMBER HARVEST. THREATENED BY ROAD USE AND POTENTIALLY COW TRAMPLING.	PVT-Green Diamond Resource Co	2500
82	KNEELAND AIRPORT, NORTHWEST END OF ASHFIELD RIDGE, APPROXIMATELY 0.9 AIR MILE NORTHWEST OF ASHFIELD BUTTE.	Humboldt	Iaqua Buttes (4012368)	CNDDDB, May 2017 (EO 92)	15-Feb-2014	25 PLANTS OBSERVED IN 2011. 20 PLANTS OBSERVED IN 2012. 215 PLANTS OBSERVED IN 2014.	DISTURBED BY RUNWAY AND CATTLE.	PVT-Humboldt Redwood Co	2700

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
83	ALONG ROAD ON SOUTH SIDE OF UPPER DAVIS CREEK, APPROXIMATELY 2.3 AIR MILES EAST OF DOLLAR RANCH.	Humboldt	Maple Creek (4012377)	CNDDDB, May 2017 (EO 93)	7-Jun-2011	300 PLANTS ESTIMATED IN 2011.	SURROUNDING LAND USE IS TIMBER HARVEST. THREATENED BY ROAD MAINTENANCE/VEHICLE TRAFFIC.	PVT-Green Diamond Resource Co	2300
84	RIDGE BETWEEN TANK GULCH AND NANNING CREEK, ~0.5 AIR MILE SE OF NANNING CREEK CONFLUENCE WITH EEL RIVER, EAST OF RIO DELL.	Humboldt	Scotia (4012441)	CNDDDB, May 2017 (EO 94)	18-Feb-2013	100 PLANTS OBSERVED IN 2009. 350 PLANTS OBSERVED IN 2011. 89 PLANTS OBSERVED IN 2013.	DISTURBED BY ATV USE AND LIGHT FOOT TRAFFIC. SURROUNDING LAND USE IS TIMBER HARVEST.	PVT-Humboldt Redwood Co	550
85	RIDGE BETWEEN GREENLOW CREEK AND BEAR CREEK, APPROXIMATELY 1 AIR MILE NORTHEAST OF HARROW PRAIRIE.	Humboldt	Scotia (4012441)	CNDDDB, May 2017 (EO 95)	30-Jan-2015	UNKNOWN NUMBER OF PLANTS OBSERVED IN 2001. 0 PLANTS FOUND IN 2009. 35 PLANTS IN 2012. 600 IN 2013. 165 IN 2014. 18 PLANTS IN 2015; PLANTS WERE VERY SMALL AND BURIED BY DUFF, WITH HEAVY COMPETITION FROM OTHER HERBS.	SURROUNDING LAND USE IS TIMBER HARVEST. ROAD RECENTLY GRADED AS OF 2012. VEG COMPETITION REDUCING POP SIZE.	PVT-Humboldt Redwood Co	1500
86	TRIBUTARY ON NORTH SIDE OF SALMON CREEK, APPROXIMATELY 3.1 AIR MILES NORTH OF NEWBURG.	Humboldt	McWhinney Creek (4012461)	CNDDDB, May 2017 (EO 96)	31-Mar-2010	1 PLANT OBSERVED IN 2010.	SURROUNDING LAND USE IS TIMBER HARVEST. THREATENED BY ROAD TRAFFIC.	PVT-Green Diamond Resource Co	700

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
87	RIDGE AT HEAD OF FISH CREEK, ABOUT 1.9 AIR MILES NW OF CONFLUENCE WITH LAWRENCE CREEK, 1.7 AIR MILES WSW OF LOW GAP.	Humboldt	McWhinney Creek (4012461)	CNDDDB, May 2017 (EO 97)	27-May-2010	2010: 30 PLANTS IN W POLY, 20 PLANTS IN MIDDLE POLY, 250 PLANTS IN E POLY. AVOIDANCE IS NOT FEASIBLE FOR MOST OF THE PLANTS, THOUGH THE UPPERMOST SECTION OF ROAD IS RECOMMENDED TO BE LEFT INTACT TO AVOID IMPACTS TO PLANTS IN THAT SECTION.	DISTURBED BY LOGGING & RD CONSTRUCTION. RESTORATION ACTIVITIES WILL DIRECTLY ELIMINATE SOME PLANTS & ALTER HYDROLOGY.	PVT-Humboldt Redwood Co	1600
88	SOUTHWEST SIDE OF FAULKNER PRAIRIE, WEST SIDE OF LACKS CREEK, ABOUT 0.4 AIR MILE EAST OF HUNDRED ACRE FIELD.	Humboldt	Hupa Mountain (4112317)	CNDDDB, May 2017 (EO 98)	12-May-2010	APPROXIMATELY 100 PLANTS OBSERVED IN 2010.	DISTURBED BY ROAD USE.	BLM	2500
89	NORTH END OF RIDGE BETWEEN GREENLOW CREEK AND BEAR CREEK, ~1.4 AIR MILES SOUTHWEST OF PEPPERWOOD.	Humboldt	Scotia (4012441)	CNDDDB, May 2017 (EO 99)	30-Jan-2015	50 PLANTS OBSERVED IN 2013, PRIOR TO HARVEST. 7 PLANTS OBSERVED IN 2014. 4 PLANTS OBSERVED IN 2015; RECENT ROADWORK HAS LEFT ROAD DRIER THAN BEFORE HARVEST.	DISTURBED BY ROAD USE/MAINTENANCE. SURROUNDING LAND USE IS TIMBER HARVEST.	PVT-Humboldt Redwood Co	950
90	LACKS CREEK, BEAVER RIDGE.	Humboldt	Lord-Ellis Summit (4012387)	CNDDDB, May 2017 (EO 100)	20-May-2009	SITE IS BASED ON 2009 ANTHONY-WHEELER COLLECTION AND PHOTO FROM THE SAME DATE. NEEDS MAP DETAIL.		Unknown	2800

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
91	PRIVATE DIRT ROAD SOUTH OF THE EEL RIVER, ABOUT 2.85 AIR MILES ENE OF FRUITLAND AND 2.15 AIR MILES WNW OF EEL ROCK.	Humboldt	Myers Flat (4012337)	CNDDB, May 2017 (EO 101)	9-Apr-2013	MORE THAN 75 PLANTS OBSERVED IN 2013.	ROAD USAGE IN THE SPRING BY OTHER PRIVATE OWNERS. SURROUNDING LAND USE IS TIMBER HARVEST.	PVT-Sierra Pacific	1053
92	PRIVATE DIRT ROADS SOUTH OF THE EEL RIVER, APPROX. 3 AIR MILES ESE OF FRUITLAND AND 1.8 AIR MILES W OF EEL ROCK.	Humboldt	Myers Flat (4012337)	CNDDB, May 2017 (EO 102)	9-Apr-2013	216 PLANTS IN TOTAL OBSERVED IN 2013: 137 PLANTS IN THE EASTERN COLONY, 78 PLANTS IN THE MIDDLE COLONY, AND 1 CLUMP IN THE WESTERN COLONY.	ROAD USAGE BY OTHER PRIVATE OWNERS. ROAD IN W COLONY BLADED OCT 2012. SURROUNDING LAND USE IS TIMBER HARVEST.	PVT-Sierra Pacific	1793
93	GRAYS FALLS CAMPGROUND PICNIC AREA IN ROAD, IRNSIDE MOUNTAIN.	Trinity	Ironside Mtn. (4012374)	CNDDB, May 2017 (EO 103)	17-Apr-2006	ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 2006 MCRAE COLLECTION.		Six Rivers NF	925
94	BETWEEN CHAIN-LINK FENCE LINE AND GRAVEL ROAD ON THE NORTH SIDE OF ARCATA HIGH SCHOOL SOCCER FIELD.	Humboldt	Arcata North (4012481)	CNDDB, May 2017 (EO 104)	7-Apr-2014	MORE THAN 1000 PLANTS OBSERVED IN AN APPROXIMATE 5 FT BY 280 FT AREA IN 2014. A THICK LAYER OF ANGULAR GRAVEL WAS ADDED TO THE ROAD ABOUT 3 YEARS AGO AND HAS SINCE SETTLED INTO THE SUBSTRATE.	WEED MANAGEMENT AND POSSIBLE HERBICIDE SPRAYING ALONG FENCE LINE. COMPETITION WITH OTHER HERBACEOUS PLANTS.	PVT	39
95	SOUTH SIDE OF MAD RIVER NEAR HATFIELD PRAIRIE, ABOUT 0.2 AIR MILE SE OF MOUTH OF DEVIL CREEK.	Humboldt	Korbel (4012378)	CNDDB, May 2017 (EO 105)	2-Apr-2014	"MULTIPLE THOUSANDS" OF PLANTS ESTIMATED IN 2014.	ROAD TRAFFIC, ENCROACHMENT OF OTHER SMALL HERBACEOUS PLANTS. LAND IS MANAGED FOR TIMBER.	PVT-Green Diamond Resource Co	300

Montia howellii Wats.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
96	HEADWATERS OF FRANCIS CREEK, ABOUT 2.6 AIR MILES SOUTH OF FERNDALE AND 2.4 AIR MILES WNW OF BUZZARDS PEAK.	Humboldt	Ferndale (4012453)	CNDDDB, May 2017 (EO 106)	6-Mar-2015	~80 PLANTS OBSERVED IN 2015.	TIMBER HARVEST OCCURRING IN AREA. ROAD MAINTENANCE AND USE, CATTLE MOVEMENT COULD ALSO IMPACT PLANTS.	PVT	970
97	GRAHAM GULCH; ABOUT 0.8 AIR MILE SOUTH OF FRESHWATER-KNEELAND RD, AND 2.8 AIR MILES WSW OF DIAMOND PRAIRIE.	Humboldt	McWhinney Creek (4012461)	CNDDDB, May 2017 (EO 107)	30-Jan-2015	2 SMALL PLANTS SEEN IN 2015.	ROAD MAINTENANCE, SURROUNDING LAND USE IS TIMBER PRODUCTION.	PVT-Humboldt Redwood Co	1095
98	WEST END OF ROACH CREEK HOLE, SE OF ROACH CREEK AND 2.8 AIR MILES NORTH OF SCHOOLHOUSE PEAK.	Humboldt	Bald Hills (4112328)	CNDDDB, May 2017 (EO 108)	29-Apr-2014	ROUGH ESTIMATE OF 3000 PLANTS OBSERVED IN 2014.	LAND IS MANAGED FOR TIMBER. ROAD GRADING AND COMPETITION FROM OTHER PLANTS ALSO THREATENS.	PVT-Green Diamond Resource Co	1335
99	Shasta-Trinity NF	Trinity	Ironside Mtn. (4012374)	NRIS, Apr 2017 (MOHO05 140001)	11-May-2000	individuals		Shasta-Trinity NF	
100	Six Rivers NF	Trinity	Ironside Mtn. (4012374)	NRIS, Feb 2017 (0510_MO HO_51038 9001)	17-Apr-2006	1250 individuals		Six Rivers NF	
101	Six Rivers NF	Humboldt	Willow Creek (4012386)	NRIS, Feb 2017 (51033900 2)	1-Apr-2005	500 individuals		Six Rivers NF	

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
102	Six Rivers NF	Trinity	Ironside Mtn. (4012374)	NRIS, Feb 2017 (510389003)	1-May-2008	100 individuals		Six Rivers NF	
103	Gray Falls Camp Ground;	Trinity	Ironside Mtn. (4012374)	NRIS, Feb 2017 (510389003)	8-Apr-2014	250 individuals		Six Rivers NF	

Distribution on National Forest System (NFS) Lands:

(Please see Reference column of Locations table above for references pertaining to Record Numbers indicated on NFS lands.)

National Forest System (NFS) lands	Record #s (from Locations table above)	CNDDDB EOs	Non-CNDDDB Records	Recent (seen in past 20 yrs.)	Historic (not seen in past 20 yrs.)	Most Recent Obs.	EOs/ Recs. (5 mile buffer)	Total Records on NFS lands
Angeles:	-	-	-	-	-	-	-	0
Cleveland:	-	-	-	-	-	-	-	0
Eldorado:	-	-	-	-	-	-	-	0
Inyo:	-	-	-	-	-	-	-	0
Klamath:	-	-	-	-	-	-	-	0
Lake Tahoe Basin MU:	-	-	-	-	-	-	-	0
Lassen:	-	-	-	-	-	-	-	0
Los Padres:	-	-	-	-	-	-	-	0
Mendocino:	-	-	-	-	-	-	-	0
Modoc:	-	-	-	-	-	-	-	0
Plumas:	-	-	-	-	-	-	-	0
San Bernardino:	-	-	-	-	-	-	-	0
Sequoia:	-	-	-	-	-	-	-	0
Shasta-Trinity:	16, 99	1	1	2	0	1-Jan-06	3	2
Sierra:	-	-	-	-	-	-	-	0
Six Rivers:	57, 58, 93, 100, 101, 102, 103	3	4	7	0	8-Apr-14	19	7
Stanislaus:	-	-	-	-	-	-	-	0
Tahoe:	-	-	-	-	-	-	-	0
Totals:	N/A	4	5	9	0	N/A	22	9

Demographic and Population Trends: Of the 103 records in the combined dataset, 96 contain estimated information related to population. Of these, one is presumed extirpated, two have reports of no plants ever being relocated, three have a population count of a single individual, three have two plants, eight have 10-50 plants, 10 have 63-100 plants, 18 have 101-300 plants, 12 have 320-600, eight have 675-1,000, 20 have 1,050-5,000, six have 6,050-10,841, one has “many thousands”, one has 20,000, one has 31,000, one has 375,223, and one occurrence is reported to have over one million plants. Of the 96 occurrences with population information, 51 have data spanning multiple years; five of the 51 display a trend of increasing numbers, one shows no change, 21 are decreasing, and 24 show both increases and decreases through time, sometimes with very substantial shifts in both directions (CNDDDB 2017, NRIS 2017). One occurrence of *M. howellii* (EO 3) is presumed extirpated and an additional five occurrences (EOs 7, 21, 42, 55, 68) are possibly extirpated. Nearly 25% of CNDDDB element occurrences for this species are ranked as ‘poor’, ‘extirpated’ or ‘unknown’ (CNDDDB 2017). It is clear that populations of *M. howellii* vary enormously in size, both between sites, and across years within sites. An accurate assessment of population size and stability there requires repeated and intensive census work.

Life History: *Montia howellii* is a succulent herbaceous annual, which blooms between March and May (CNPS 2018). While the pollination biology of *M. howellii* is unknown, the closely related genus *Claytonia* is visited by Diptera (Bombyliidae and Syrphidae), Hymenoptera (Andrenidae, Apidae, Halictidae, and Megachilidae) and Lepidoptera (Hesperiidae, Lycaenidae, Nymphalidae, and Pieridae) (CPC 2018). It is likely that some or all of these groups also associate with *Montia* spp.

Diversity: Montiaceae is one of about 70 plant families in which succulence occurs, generally as an adaptation to aridity (Nyffeler et al. 2008). It consists of 225 species arranged in 14 genera, of which the most species-rich are: *Parakeelya* (40-70 species), *Montiopsis* (40 species), *Claytonia* (27 species) and *Phemeranthus* (25-30 species). The family occurs across most of the world, but is especially well developed in western North and South America, as well as the Antilles and the Subantarctic Islands (Stevens 2001). Ancestral area analyses suggest that both *Montia* and *Claytonia* originated in western North America (O'Quinn and Hufford 2005). Within the suborder Portulacineae, Montiaceae are noted for evolutionary lability with extensive variation in habit and habitat, often entailing a switch between annual and perennial life history as lineages invade cooler and more seasonal habitats (Ogburn and Edwards 2012).

Habitat: *Montia howellii* is found in north coast coniferous forest, inhabiting mesic sites with abundant water, including meadows and seeps, vernal pools, and occasionally roadsides (CNPS 2018). In areas with dense vegetation, this species may require periodic disturbance in order to persist (CNDDDB 2017).

Habitat Status or Trend: The Klamath Ranges (KR) and adjoining North Coast Ranges (NCoR) bioregions have played host to a remarkable diversification in plant species, as a consequence of complex geology and a long history of isolation (Whittaker 1960). The area is one of six globally important temperate forest biodiversity hotspots, having served as a climatic refugium during the Pleistocene. More than a century of land use, including logging, mining, grazing and modification of fire regimes, has significantly altered much of the region. Only 28% of the old-growth forest remains, and ongoing human impacts continue to degrade wild communities, especially in mesic lowland and mid-elevation areas, encompassing the elevation range of *M. howellii*. The scale and speed of anthropogenic climate change might exceed the capacity of the Klamath region to provide refugia for taxa of low mobility and narrow ecological requirements, though careful management may partially mitigate this risk (Olson et al. 2012).

Capacity for the Species to Disperse: The capsular fruits of *M. howellii* dehisce by an in-folding of valve margins, which can result in forcible ejection of seeds (Stevens 2001). The seeds of some members of both *Montia* and *Claytonia* (Montiaceae) are dispersed by ants (Lengyel et al. 2010), which is a reliable means of short-distance dispersal (Gomez and Espadaler 1998). Self-pollination occurs widely in Montiaceae (Grossenbacher et al. 2018), and has been observed in *M. howellii* (Miller and Chambers 2012). This capacity facilitates colonization of new areas, especially relevant for taxa occurring in patchy or insular habitats (Baker 1955).

Threats: *Montia howellii* is threatened by logging, road construction and maintenance, disturbance by vehicles, and competition from invasive species (CNPS 2018). Throughout its range, the expansion of agriculture into favorable habitat poses a threat to this species, as does the loss of vernal pool complexes, which have declined by as much as 95% in California (Barbour et al. 2007, NatureServe 2018).

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Julie A. Kierstead, USDA Forest Service Region 5 Ecosystem Planning, 7 January 7, 2021

Formatting: Form is set up as 508 compliant. Please use the “styles” if further formatting is necessary.

Purpose: This is to maintain the best available science on a species that could be used by the Forest Service in a variety of functions. Specifically, there would be additional steps and evaluations to determine whether or not this species would be considered a Species of Conservation Concern under the 2012 Planning Rule or a Sensitive Species under the 1982 Planning Rule.

Additional Considerations at the Forest Level: Habitat amount and juxtaposition of both the species and habitat locations.